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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,135	07/31/2006	Young-Nam Kim	5038-061693	3852

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EXAMINER

GEORGE, KONATA M

ART UNIT	PAPER NUMBER
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1616

MAIL DATE	DELIVERY MODE
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08/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,135	Applicant(s) KIM, YOUNG-NAM	
	Examiner KONATA M. GEORGE	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-59 is/are pending in the application.
- 4a) Of the above claim(s) 40,45,46 and 48-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-39,41-44 and 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2962008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 31-59 are pending in this application.

Drawings

The drawing(s) filed under 37 CFR 1.184 or 1.152 are acknowledged by the examiner.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on June 29, 2007 was noted and the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Restriction/Election of Species

Applicant's election without traverse of Group I, claims 31-48 in the reply filed on April 30, 2008 is acknowledged. Examiner also acknowledges the election of silver as the species of choice. Therefore, claims 31-39, 41-44 and 47 will be examined in view of applicants' election. Claims 40, 45, 46 and 48-59 will not be examined as they are directed to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 31-39, 41-44 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kydd et al. (US 6,153,348) in view of Hack et al. (US 6,264,801).

Applicant claims a paramagnetic nanopowder comprising silver powder having paramagnetism at an absolute temperature of 20K or greater.

Determination of the scope and content of the prior art

(MPEP §2141.01)

Kydd et al. teach in column 7, example 1, a process for preparing coated silver particles. Column 2, line 67 through column 3, line 1 teach that the silver flake has a particle size of 5 microns.

Ascertainment of the difference between the prior art and the claims

(MPEP §2141.02)

Kydd et al. do not teach the silver particles as being paramagnetic, or being paramagnetic at an absolute temperature of 20K or higher, the external magnetic field value, the positive mass magnetization, coercive force or particle size of less than 3 microns. It is for this that Hack et al is joined.

Hack et al. teach in column 3, lines 13-15 it is taught that silver is a paramagnetic materials.

Finding of prima facie obviousness

Rational and Motivation (MPEP §2142-2143)

As mentioned above, Kydd et al do not teach that silver particles are paramagnetic. This deficiency is solved by the teachings of Hack et al. which disclose that silver is paramagnetic and has magnetic properties.

With respect to the limitation of the absolute temperature, it is the position of the examiner that while the prior art is silent with respect to the limitation, it would have been obvious. 20K is equal to -423.67°F or -253.15°C. It is the position that reading the specification of Kydd et al. it is noted that the preparation of the silver particles is well over 20K and reads on the claimed limitation.

It is the position of the examiner that the physical characteristics of the silver particles, i.e. the external magnetic field value, the positive mass magnetization or coercive force would have been obvious to one of ordinary skill in the art. This is further

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evidenced by *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties the applicants discloses and/or claims are necessarily present.

With respect to the particle size being less than 3 microns, this determination would have been made through routine experimentation to achieve the desired results of the claimed invention. This is in the absence of any clear showing of unexpected results attributable to the specific particle size employed by applicant in the instant case.

Conclusion

Claims 31-39, 41-44 and 47 are rejected.

Telephone Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Konata M. George, whose telephone number is 571-272-0613. The examiner can normally be reached from 8:00AM to 6:30PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter, can be reached at 571-272-0646. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Konata M. George/
Primary Examiner, Art Unit 1616